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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: SABBATINO et al.
SERIAL NO.: 10/804,696 ART UNIT: 2821
FILING DATE: 19 March 2004 EXAMINER: Wong, D. K.
TITLE: TRANSMITTER OPTICAL SUB ASSEMBLY, FOR
INSTANCE FOR HIGH SPEED OPTICAL TRANSCEIVERS

ATTORNEY DOCKET NO.: 36021247-2

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

I. INTRODUCTION

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

Reconsideration of the rejection of the claims is respectfully solicited in light of the following remarks.

II. REMARKS

The Examiner has not established that Reedy et al. (US 6,583,445, "Reedy") anticipates claims 1, 9-11, and 18 under 35 USC 102(b).

To anticipate a claim, the reference must teach every element of the claim.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP 2131, quoting *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Reedy fails to disclose or suggest a laser driver, fails to disclose or suggest respective separate compartments for said laser source and said laser driver, and further fails to disclose or suggest that the laser source and the laser driver are arranged in said separate compartments whereby said laser source is exempt from being directly irradiated by said laser driver, all as recited by claims 1 and 18.

1. Reedy fails to disclose or suggest a laser driver.

The Examiner equates item 34 of Figure 3A of Reedy with the laser driver of the present invention. Item 34 of Reedy is clearly a lens.

Column 18, lines 4-9 of Reedy state:

The system 29 includes an 8x8 transmitter array 30 of substrate emitting (i.e., bottom-emitting) InGaAs-quantum-well VCSELs 31 as transmitters, an 8x8 receiver array 32 of backside illuminated InGaAs/InP photodetectors 33 as receivers, and a compound lens 34 to optically couple them.
(Emphasis added)

Column 18, lines 16-29 of Reedy state:

The VCSEL 31 and photodetector 33 arrays 30,32 are positioned relative to the compound lens 34 such that one-to-one magnification is achieved from the VCSEL array 30 to the image projected onto the detector array 32. The lens 34 (made by Universe Kogaku Inc.) has the following characteristics: 13.0-mm focal length, 6.76-mm back focal length, 5.36.times.4.01-mm format size, and f1 1.12.
(Emphasis added)

Applicants recognize that during patent examination, the pending claims must be given their broadest reasonable interpretation, but that interpretation must be consistent with the specification. See MPEP 2111 quoting *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).

Page 1, line 31 through page 2, line 2 of the present specification describe arrangements that minimize the connection between a laser driver and a laser diode but suffer from heat dissipated by the driver. Page 2, lines 22-35 describe electrical connections and impedance mismatches between the laser driver and the laser diode, adding a resistor in series between the two, and how the laser driver output is supply voltage limited.

The specification clearly describes the laser driver as an electronic device and in no way suggests that the laser driver could be a lens.

Equally important, the broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. MPEP 2111 quoting *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

The web site of Dallas Semiconductor, a manufacturer of laser products defines a laser driver as a device that supplies current to a laser diode. See http://www.maxim-ic.com/glossary/index.cfm/Ac/V/ID/192/Tm/LASER_DRIVER/ln/en,A.

Even the cited reference Reedy describes a laser driver as an electronic device, see for example, column 13, lines 5-8, describing electronic circuits for controlling

optoelectronic devices, such as vertical cavity surface emitting laser drivers.

Applicants assert that that no one skilled in the art would equate the laser driver of the present claims with the lens of Reedy.

2. Reedy fails to disclose or suggest respective separate compartments for the laser source and the laser driver.

Figures 2A-2C and column 15, lines 55-65 cited by the Examiner, describe a top emitting vertical cavity surface emitting laser 20 and a MOS transistor 21 forming an integrated module 10. There is nothing related to separate compartments for the laser source and its driver. The laser 20 and transistor 21 are coupled together by solder bump 18 and the laser cavity extends through the surface of the transistor 21. Figures column 16, lines 1-65, also cited by the Examiner describe various configurations of vertical cavity surface emitting laser 20. Figures 3A-3E show various arrays of vertical cavity surface emitting lasers and photodetectors. The description is silent with respect to separate compartments for the laser 20 and transistor 21 and there is nothing shown in the Figures that even suggests such a compartment. Thus, there is nothing in these sections or in any other section of Reedy related to separate compartments for a laser source and a laser driver.

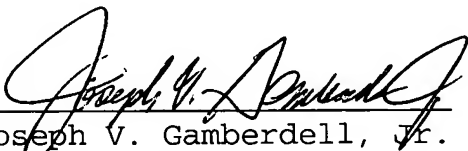
3. Reedy fails to disclose or suggest that the laser source and the laser driver are arranged in the separate compartments whereby the laser source is exempt from being directly irradiated by the laser driver. There is simply no disclosure in Reedy related to any arrangement that prevents the laser source from being irradiated by the laser driver.

Thus, Reedy fails to anticipate independent claims 1 and 18, and dependent claims 2-17.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

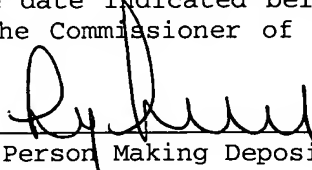

Joseph V. Gamberdell, Jr.
Reg. No. 44,695

24 March 2006
Date

Perman & Green, LLP
425 Post Road
Fairfield, CT 06824
(203) 259-1800
Customer No.: 2512

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